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SEMICONDUCTOR DEVICE MANUFACTURING METHOD

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Claim

Semiconductor device manufacturing method characterized in that, in a semiconductor device manufacturing method wherein an element or device formed on a first semiconductor substrate and an element or device formed on a second semiconductor substrate are electrically connected, it includes a method for connecting elements or devices wherein terminal electrodes are bonded to each other by a silicide chemical bonding force composed of a process wherein terminal electrodes--made of materials, one of which is silicon to which a high concentration of impurities has been added, and the other a type of metal that forms a silicide by reacting with silicon--are formed, with projecting shapes approximately equal in height on at least one of these, in a position wherein, when the two semiconductor substrates are made to face each other, the terminal electrodes that will bond the elements or devices will be in the correct positions relative to each other, then with the two semiconductor substrates being positioned facing each other, and by applying a heat treatment with the two semiconductor substrates held so that the terminal electrodes to be bonded are tightly pressed together, a solid-phase siliciding reaction will be produced at the interface between the two terminal electrodes that are tightly pressed together.

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